



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/616,995	07/11/2003	Ilan Calderon	1311OBT-US	2778

7590 07/06/2006  
Dekel Patent Ltd.  
Beit HaRofim  
Room 27  
18 Menuha VeNahala Street  
Rehovot,  
ISRAEL

EXAMINER

NGUYEN, HUONG Q

ART UNIT PAPER NUMBER

3736

DATE MAILED: 07/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/616,995	<b>Applicant(s)</b> CALDERON ET AL.	
	<b>Examiner</b> Helen Nguyen	<b>Art Unit</b> 3736	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 June 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Drawings*

1. The drawings of **Figure 2** are objected to under 37 CFR 1.83(a) because they appear to fail to clearly show the three-dimensional image of muscle contraction as sensed by the claimed position sensing system, as described on p.5 of the specification. In addition, the inclusion of element numbers would enhance said objected drawing. Applicant is reminded that no new matter may be added while overcoming this drawing objection. Examiner notes that said drawing objection is at least in part due to the 112 rejections described in further detail below.
2. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and

Art Unit: 3736

informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. **Claims 1-7** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter that was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

5. The disclosure fails to describe or teach one of ordinary skill in the art how the claimed processor operative to process data of the claimed EMG system and the claimed three-dimensional position and orientation information from the at least one position sensor would provide an output that comprises electromyographic activity data as a function of the three-dimensional position and orientation of said at least one position sensor. The disclosure fails to describe or teach one of ordinary skill in the art exactly what is meant by electromyographic activity data as “a function of” three-dimensional position and orientation of the at least one position sensor.

6. Examiner notes that said subject matter is only mentioned on p.2 and p.4 (last paragraph) of the specification, using the same language as that recited in the claims.

Art Unit: 3736

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. **Claims 1-7** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, also evidenced by the enablement problem associated with the disclosure.

9. Specifically, one of ordinary skill in the art is not able to clearly point out and distinctly identify how the claimed processor operative to process data of the claimed EMG system and the claimed three-dimensional position and orientation information from the at least one position sensor would provide an output that comprises electromyographic activity data as a function of the three-dimensional position and orientation of said at least one position sensor. Thus, the claim is indefinite because it fails to distinctly point out to one of ordinary skill in the art exactly what is meant by electromyographic activity data as “a function” of three-dimensional position and orientation of the at least one position sensor.

10. Applicant is reminded that no new matter may be added in correcting the above 112 rejections.

***Allowable Subject Matter***

11. **Claims 1-7** would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action. No prior art teaches alone or in combination data output that comprises electromyographic activity data as a function of the three-dimensional position and orientation of at least one position sensor.

*Response to Arguments*

12. Applicant's arguments filed 6/19/2006 have been fully considered but they are not persuasive. Applicant contends that the specification is enabled and the claims are definite in regards to the understanding of the phrase electromyographical activity "as a function of" three-dimensional position and orientation of the at least one position sensor. This argument is not found persuasive for the following reasons.

13. Firstly, applicant states that the term "is a function of" is well known, particularly in mathematics and the science world. Applicant then gives a definition of "function" that refers to a mathematical concept. In response to this, the office notes that no such mathematical reference exists within the specification, thus rendering an application of the cited definition to said specification and said claims as nonenabling and indefinite, respectively.

14. Secondly, because applicant concedes that the term "a function of" is common knowledge within the science world, one of ordinary skill in the art would extract a reasonably broad definition corresponding to a general relation between one element and another, in the instant case, between the electromyographic activity and the three-dimensional position and orientation of the at least one position sensor. If this is the case, such understanding of "a function of" cannot be differentiated from another more specific definition, i.e. a mathematical definition, because only one sentence using the same language as that presented in the claims is given in the specification (pg.4 bottom) to elaborate the meaning of "a function of." Thus, an exact and clear understanding of "a function of" is not enabled by the specification and thus renders the claims indefinite as rejected above.

Art Unit: 3736

15. The office notes that applicant has provided information as to how the electromygraphic activity and how the spatial coordinates of the position sensor may be obtained. However, as reiterated above, applicant has not provided sufficient information to describe the exact meaning of “function” as desired within the recited claims. For example, exactly how will this “a function of” manifest itself in the image of the muscle activity?

16. Applicant also contends that Figure 2 displays a three-dimensional image of the muscle sensed by the position sensors along with the EMG and CTG sensors. This is not found persuasive because it is noted that said figure definitely does not show a three-dimensional image and thus, said drawings fail to present a clear understanding of the three-dimensional image as a product of the electromyographical activity data “as a function of” three-dimensional position and orientation data of the at least one position sensor. Therefore, said drawings remain objected to.

17. Applicant contends that the claims are definite for the reasons argued above. However, in response, the office maintains the same position as to why this is not found persuasive.

### *Conclusion*

18. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

Art Unit: 3736

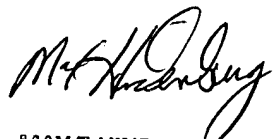
will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen Nguyen whose telephone number is 571-272-8340. The examiner can normally be reached on Monday - Friday, 8 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on 571-272-4726. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HQN  
6/26/2006



MAX F. HINDENBURG  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3700